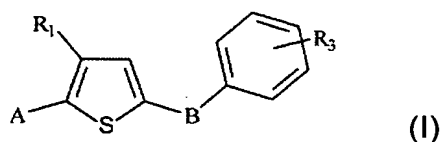


This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Currently Amended) Process for preparing 2,5-disubstituted 3-alkylthiophenes of formula



in which

A represents a CH<sub>3</sub>, R<sub>2</sub>CH<sub>2</sub>, HOCH<sub>2</sub> or R<sub>2</sub>CH(OH)- group,

B represents a CHOH or CH<sub>2</sub> group,

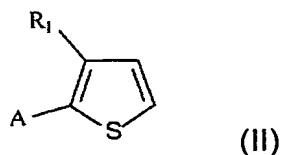
R<sub>1</sub> represents H or a C<sub>1</sub>-C<sub>5</sub> alkyl group,

R<sub>2</sub> represents a C<sub>1</sub>-C<sub>5</sub> alkyl group,

R<sub>3</sub> represents H or a C<sub>1</sub>-C<sub>5</sub> alkyl group or a C<sub>1</sub>-C<sub>5</sub> haloalkyl group, or a halogen chosen from fluorine, chlorine and bromine,

which comprises:

(a) [[the]] reaction of a compound of formula

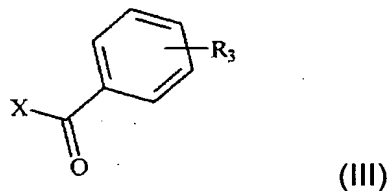


in which

A represents a CHO, CH<sub>3</sub>, R<sub>2</sub>CH<sub>2</sub> or R<sub>2</sub>-CO- group, and

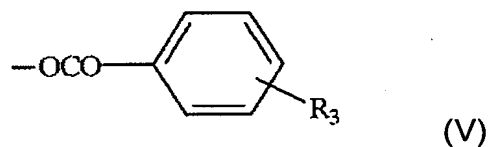
R<sub>1</sub> and R<sub>2</sub> have the meanings given above;

with a compound of formula



in which

X represents OH, halogen or a group of formula



or a group of formula

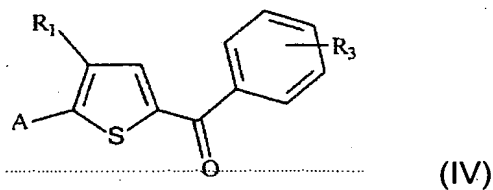


in which

R<sub>4</sub> represents a C<sub>1</sub>-C<sub>5</sub> alkyl, an optionally substituted benzyl or an optionally substituted aryl, and

R<sub>3</sub> has the meanings given above;

to give a compound of formula

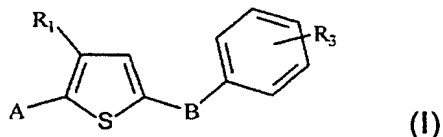


in which

A, R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> have the meanings given above; and

- (b) [[the]] reduction of the compound of formula IV thus obtained to give the compound of formula I.

2.(Currently Amended) The process of ~~Process according to~~ Claim 1 for the preparation of 2,5-disubstituted 3-alkylthio-phenes of formula

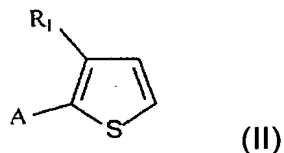


in which

A represents a  $\text{CH}_3$  or  $\text{R}_2\text{CH}_2$  group,

which comprises:

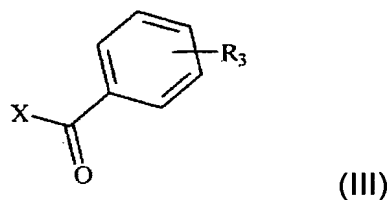
(a) ~~[[the]]~~ reaction of a compound of formula



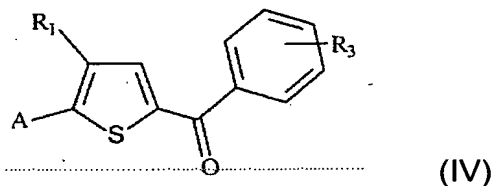
in which

A represents a  $\text{CH}_3$  or  $\text{R}_2\text{CH}_2$  group,

with a compound of formula



to give a compound of formula

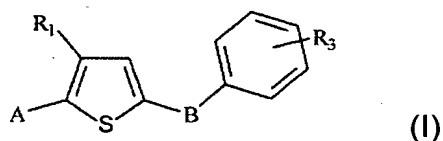


in which

A represents a  $\text{CH}_3$  or  $\text{R}_2\text{CH}_2$  group, and

- (b) [[the]] reduction of the compound of formula IV thus obtained to give the compound of formula I.

3.(Currently Amended) The process of ~~Process according to~~ Claim 1 for the preparation of 2,5-disubstituted 3-alkylthiophenes of formula

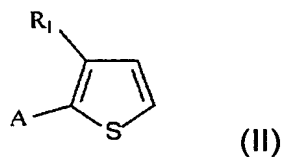


in which

A represents a  $\text{CH}_3$ ,  $\text{R}_2\text{CH}_2$ ,  $\text{HOCH}_2$  or  $\text{R}_2\text{CH}(\text{OH})$ - group,

which comprises:

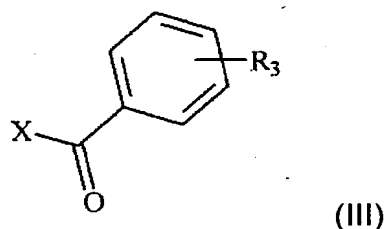
- (a) [[the]] reaction of a compound of formula



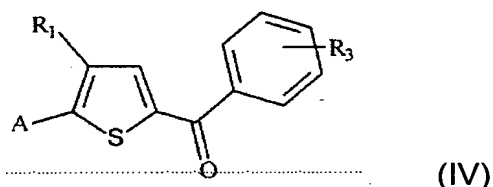
in which

A represents a  $\text{CHO}$  or  $\text{R}_2\text{-CO-}$  group,

with a compound of formula



to give a compound of formula



in which

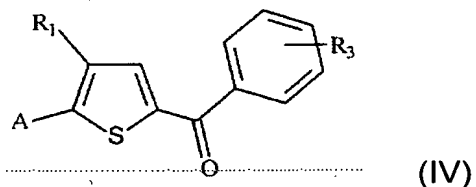
A represents a CHO or R<sub>2</sub>-CO group, and

- (b) [[the]] reduction of the compound of formula IV thus obtained to give the compound of formula I.

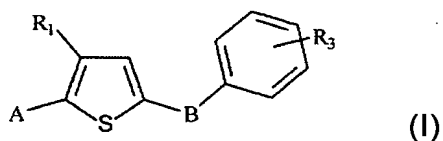
4.(Currently Amended) The process of ~~Process according to~~ Claim 1 in which the reaction mentioned in point (a) is performed with a compound of formula III, in which X represents halogen, in the presence of a Lewis acid and in a solvent chosen from chlorinated solvents and deactivated aromatic solvents, ~~preferably with benzoyl chloride,~~ in the presence of AlCl<sub>3</sub> and in methylene chloride, in which the molar ratio of compound III/Lewis acid/compound II is between 0.9-1.5/0.9-1.5/1 ~~and preferably about 1/1/1.~~

5.(Original) Process according to Claim 1, in which the reduction mentioned in point (b) is performed by means of a single reductive treatment of the

compound of formula



to give the compound of formula



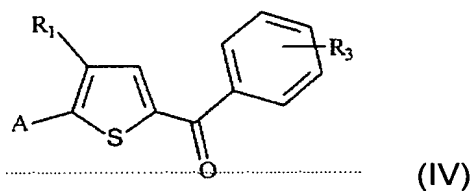
in which

A represents a  $CH_3$  or  $R_2CH_2$  group, and

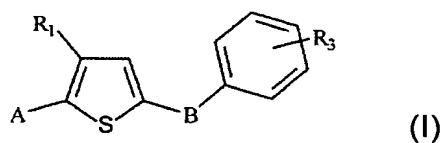
B represents a  $CH_2$  group.

6.(Original) Process according to Claim 5, in which the said reductive treatment is performed with sodium borohydride or sodium cyanoborohydride in the presence of trifluoro-acetic acid.

7.(Original) Process according to Claim 1, in which the reduction mentioned in point (b) is performed by means of a first reduction reaction ( $b_1$ ) of the compound of formula



to give the hydroxylated intermediate compound of formula

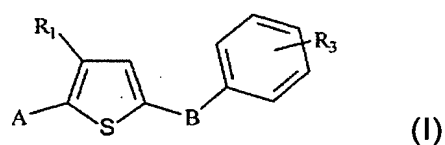


in which

A represents a  $\text{CH}_3$ ,  $\text{R}_2\text{CH}_2$ ,  $\text{HOCH}_2$  or  $\text{R}_2\text{CH}(\text{OH})$ - group, and

B represents a  $\text{CHOH}$  group;

optionally followed by a second reduction reaction ( $b_2$ ) of the said hydroxylated intermediate of formula I to give a final compound of formula



in which

A represents a  $\text{CH}_3$  or  $\text{R}_2\text{CH}_2$  group, and

B represents a  $\text{CH}_2$  group.

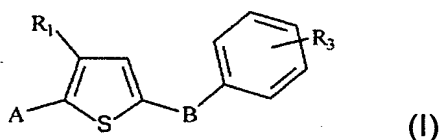
8.(Original) Process according to Claim 7, in which the reduction mentioned in point (b) is performed by means of the said reduction reactions ( $b_1$ ) and ( $b_2$ ) successively.

- 9.(Currently Amended) ~~Process~~ The process according to Claim 7, in which the first of the said reduction reactions ( $b_1$ ) is performed by treatment with metal hydrides[[, such as]] selected from the group consisting of sodium borohydride, lithium aluminium hydride, [[or]] boranes, and mixtures thereof, or by treatment with aluminium isopro-poxide, ~~preferably by treatment with sodium borohydride.~~
- 10.(Currently Amended) The process of [[Process according to]] Claim 7, in which the second of the said reduction reactions ( $b_2$ ) is performed by treatment with a borohydride in the presence of a strong acid[[, such as]] selected from the group consisting of trifluoroacetic acid, methanesulphonic acid, [[or]] sulphuric acid, and mixtures thereof, or with zinc iodide or by catalytic hydrogenation[[,]] ~~preferably by treatment with sodium borohydride and trifluoroacetic acid.~~
- 11.(Currently Amended) The process of [[Process according to]] Claim 7, in which the second of the said reduction reactions ( $b_2$ ) is performed by catalytic hydrogenation of the hydroxylated intermediate of formula I ( $B=CHOH$ ) dissolved in a suitable solvent, ~~such as an alcohol, for instance methanol, ethanol or isopropanol, preferably methanol, or in a mixture of water and alcohols,~~ at a hydrogen pressure of between 1 and 10 bar, at a temperature of between 15 and 60°C, in the presence of a hydrogenation catalyst chosen from palladium and platinum, ~~preferably palladium~~ supported on an inert support



~~such as carbon, alumina, silica or zeolites, preferably on carbon,~~ in a neutral or acidic medium.

12.(Original) Process according to Claim 7, in which the said hydroxylated intermediate compound of formula



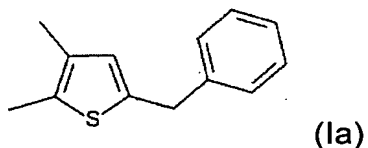
in which

$A$  represents a  $CH_3$ ,  $R_2CH_2$ ,  $HOCH_2$  or  $R_2CH(OH)$ - group, and

$B$  represents a  $CHOH$  group

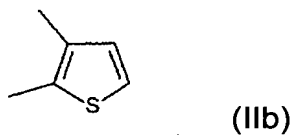
is purified by crystallization.

13.(Original) Process for preparing 2,3-dimethyl-5-benzylthiophene of formula

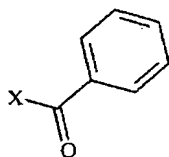


which comprises:

(a) the reaction of the compound of formula

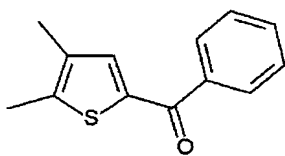


with a compound of formula



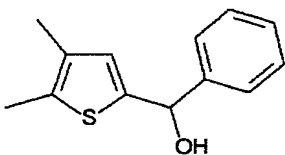
(III)

in which X represents halogen;  
 to give the compound of formula



(IVb)

(b<sub>1</sub>) the reduction of compound IVb to give the hydroxylated intermediate  
 compound of formula



(Ic)

and

(b<sub>2</sub>) the reduction of the hydroxylated intermediate compound Ic to give 2,3-  
 dimethyl-5-benzylthiophene (Ia).

14.(Currently Amended) The process of Process according to Claim 13, in which  
the reaction (a) is performed in the presence of a Lewis acid and a molar ratio  
of compound III/Lewis acid/compound II ranges from 0.9-1.5/0.9-1.5/1,  
the reduction reaction (b<sub>1</sub>) is preformed by treatment wit a metal hydride, and  
the reduction reaction (b<sub>2</sub>) is performed by treatment with a borohydride in the  
presence of a strong acid selected from the group consisting of trifluoroacetic

acid, methanesulfonic acid, or sulfuric acid, or in the presence of zinc iodide  
or by catalytic hydrogenation

~~the reactions mentioned in points (a), (b<sub>1</sub>) and (b<sub>2</sub>) are performed under the~~  
~~experimental conditions of Claims 4, 9 and 10, respectively.~~

15.(Currently Amended) The process of ~~Process according to~~ Claim 13, in which  
the hydroxylated intermediate compound of formula Ic is purified by  
crystallization, ~~preferably from n-heptane.~~

16.(New) The process of claim 4, wherein the solvent is benzoyl chloride.

17.(New) The process of claim 4, wherein the molar ratio of compound III/Lewis  
acid/compound II is 1/1/1.

18.(New) The process of claim 7, wherein the second reduction reaction (b<sub>2</sub>) is  
performed by treatment with sodium borohydride.

19.(New) The process of claim 7, wherein the second reduction reaction (b<sub>2</sub>) is  
performed by treatment with sodium borohydride and trifluoroacetic acid.

20.(New) The process of claim 7, wherein the hydrogenation catalyst is  
palladium supported on an inert support.

- 21.(New) The process of claim 7, wherein the inert support is selected from the group consisting of carbon, alumina, silica, zeolite, and mixtures thereof.
- 22.(New) The process of claim 7, wherein the inert support is carbon.
- 23.(New) The process of claim 13, wherein the hydroxylated intermediate compound of formula 1c is purified by crystallization from n-heptane.
- 24.(New) The process of claim 11, wherein the suitable solvent is an alcohol or a mixture of water and the alcohol.
- 25.(New) The process of claim 11, wherein the alcohol is selected from the group consisting of methanol, ethanol, isopropanol, and mixtures thereof.
- 26.(New) The process of claim 11, wherein the alcohol is methanol.
- 26.(New) The process of claim 11, wherein the hydrogenation catalyst is palladium.